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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,021	08/09/2001	Minekazu Sakai	01-186	2499
23400	7590	12/01/2004	EXAMINER	
POSZ & BETHARDS, PLC 11250 ROGER BACON DRIVE SUITE 10 RESTON, VA 20190			CHAPMAN JR, JOHN E	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 12/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/925,021	Applicant(s) SAKAI ET AL.	
	Examiner John E Chapman	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-10 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4,7-10,21 and 22 is/are allowed.
- 6) ☒ Claim(s) 19,20,23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 8, 2004 has been entered.

2. Claims 19, 20, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakai et al. (6,450,031).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Sakai et al. disclose a semiconductor dynamic quantity sensor comprising a frame member 5 in Fig. 1 formed of silicon and having an insulation layer 6 formed on the frame member. The frame member 5 has a square hole 8 formed in the middle thereof. See column 8, lines 48-51. A square hole formed in the middle of a frame member would form frame parts on each side having the same width, and thereby having a difference less than 15%. Sakai et al. also disclose a semiconductor dynamic quantity sensor comprising a frame member 20 in Fig. 31 having an opening 21, wherein the width of the top frame part to which anchoring part 233a is attached is equal to the width of the bottom frame part to which anchoring part 233b is attached.

3. Claims 19, 20, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi et al. in view of Sakai et al. (6,151,966).


Takeuchi et al. disclose a semiconductor dynamic quantity sensor comprising an insulation layer 22, a movable electrode 161 and a fixed electrode 191 supported by the insulation layer. As shown in Fig. 2B, the opposing parts of insulation layer 22 have approximately the same width. Accordingly, the only difference between the claimed invention and the prior art consists in forming the opening 24 from a through hole in a silicon layer. Sakai et al. teach in Fig. 23 that it is conventional in the prior art to form a semiconductor dynamic quantity sensor from a through hole in a silicon layer 19 and insulation layer 21. Accordingly, merely to form the opening 24 of Takeuchi et al. from a through hole in a silicon layer would have been an obvious method of forming the opening 24 of Takeuchi et al. in view of Fig. 23 of Sakai et al.

4. Applicant's arguments filed October 8, 2004 have been fully considered but they are not persuasive. Applicant argues that Takeuchi et al. do not teach or suggest a frame member formed of silicon and including an opening defined between first and second frame parts. However, a frame member formed of silicon and including an opening defined between first and second frame parts is conventional in the art, as evidenced by Fig. 23 of Sakai et al. (6,151,966), Merely to construct the semiconductor dynamic quantity sensor of Takeuchi et al. in a conventional manner would have been obvious to one having ordinary skill in the art.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John E Chapman
Primary Examiner
Art Unit 2856